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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,503	02/19/2004	Shinichi Kurita	007956	4718
41161	7590	10/06/2005	Display/AHRDWRE	
DUGAN & DUGAN, PC 55 SOUTH BROADWAY TARRYTOWN, NY 10591			EXAMINER NGUYEN, JIMMY	
			ART UNIT	PAPER NUMBER
			2829	

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

10/782,503

Applicant(s)

KURITA ET AL.

Examiner

Jimmy Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>0604</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 – 9, 20, 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Burkhardt et al (US 6,075,375).

As to claims 1, 20, Burkhardt et al disclose (fig 1) a sensing system and a method adapted to determine a position of an edge of a substrate relative to a stage that supports the substrate, comprising:

a plurality of probes (106) arranged in a spaced relation around a stage (102) that is adapted to support a substrate, wherein each probe includes a detection portion that is adapted to:

move from a known starting position (column 4 lines 40 – 56) toward an edge of the substrate that is supported by the stage;

detect the edge of the substrate while the substrate is supported by the stage (102);

generate a detection signal (signal from 106 to 110) following said detection; and stop moving toward the edge of the substrate (column 5 lines 7 – 25) following said detection; and

a controller (110) coupled to the plurality of probes (106) and adapted to determine a position of the edge of the substrate relative to the stage based on the known starting position of each detection portion and based on the detection signal generated by each detection portion.

As to claim 2, Burkhardt et al disclose (fig 1) the sensing system of claim 1, wherein each detection portion (106) comprises a switch adapted to contact the edge of the substrate and generate a detection signal upon said contact.

As to claim 3, Burkhardt et al disclose (fig 1) the sensing system of claim 1, wherein each of the detection portions (106) is adapted to move toward the edge of the substrate along a straight-line path.

As to claim 4, Burkhardt et al disclose (fig 1) the sensing system of claim 3, wherein the plurality of probes (106) resides in a common plane (dot lines) containing the straight-line paths of the detection portions.

As to claims 5, 22, Burkhardt et al disclose (fig 1) the sensing system of claim 4, wherein the plurality of probes (106) includes a first and a second probe positioned along a first line within the common plane when the first and second probes are retracted.

As to claims 6, 9, Burkhart et al disclose (fig 1) the sensing system of claim 5, wherein the plurality of probes (106) includes a third and a fourth probe positioned at an opposite side of the stage from the first and second probes along a second line within the common plane when the third and fourth probes are retracted.

As to claim 7, Burkhart et al disclose (fig 1) the sensing system of claim 6, wherein the plurality of probes (106) includes a fifth probe positioned along a third line within the common plane and approximately perpendicular to the first and second lines when the fifth probe is retracted.

As to claim 8, Burkhart et al disclose (fig 1) the sensing system of claim 7, wherein the plurality of probes includes a sixth probe positioned at an opposite side of the stage from the fifth probe along a fourth line within the common plane and approximately perpendicular to the first and second lines when the sixth probe is retracted.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 10 – 19, 21, 23, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burkhardt et al (US 6,075,375) in view of Little (US 6,624,897).

As to claims 10 - 13, 16, 17, 21, Burkhardt et al disclose everything except for a plurality of drive mechanisms, each drive mechanism coupled to a respective one of the probes and adapted to move the respective one of the probes toward and away from the edge of the substrate.

On the other hand, Little teaches a plurality of drive mechanisms (42, 52); each drive mechanism coupled to a respective one of the probes and adapted to move the respective one of the probes toward and away from the edge of the substrate.

It would have been obvious to one having an ordinary skill in the art at the time of the invention was made to modify the teaching of Burkhardt et al with the drive mechanism of Little for the purpose providing moving mechanism for the probes.

As to claim 11, Little teaches drive mechanism (42, 52) comprise motor.

As to claim 14, Burkhardt et al disclose (fig 1) the sensing system of claim 12 wherein the controller is further adapted to determine a distance the detection portion of each probe (106) traveled from the known starting position (column 4 lines 40 – 56) of the detection portion to a position at which the detection portion detected the edge of

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the substrate; and determine the position of the edge of the substrate relative to the stage based on the distance traveled by the detection portion of each probe.

As to claims 15, 24, Burkhart et al disclose (fig 1) the sensing system of claim 14 wherein the controller (110) is further adapted to determine straightness of the substrate relative to the stage based on a plurality of the determined distances.

As to claim 18, Burkhart et al disclose (fig 1) the sensing system of claim 1, wherein each detection portion (106) comprises a switch adapted to contact the edge of the substrate and generate a detection signal upon.

As to claims 19, 23, Burkhart et al disclose (fig 1) the probe of claim 16 wherein: the detection portion (106) is further adapted to retract from the stage (102) so as to allow the substrate to be loaded onto and removed from the stage; and the controller (110) is further adapted to direct the drive mechanism to retract the detection portion to the known starting position of the detection portion.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy Nguyen whose telephone number is 571-272-1965. The examiner can normally be reached on M-F from 9 to 5.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ramtez Nestor, can be reached on 571-272-2034. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jimmy Nguyen

10/1/05


VINH NGUYEN
PRIMARY EXAMINER
A.U. 2829
10/03/05